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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/758,845

Filing Date: January 16, 2004

Appellant(s): RAMIREZ ET AL.

Kang S Lim
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed November 17th, 2008 appealing from the Office action mailed March 17th, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. In light of the filing of the approved terminal disclaimers, the non-statutory obviousness-type double patenting rejections of claims 4-11 in the instant application as being unpatentable over claims 1-8 of U.S. Patent 6,532,876 and claims 1-2 of U.S. Patent 6,679,150 are withdrawn.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5970879 Jamison 10-26-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

Claims 4-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, the last limitation of claim 4 states, "the length of the case section is dependent upon water weight volume of the cartridge case, the bore diameter of the gun barrel, and the weight of the bullet." There is no indication, in the specification or claims, as to how the length of the case depends on these variables, and further, what value might be specified by these variables. As such it is indefinite.

Furthermore, no actual cartridge case is positively claimed. Thus any limitations on the water weight volume, bore diameter of the mouth, or the weight of the bullet are irrelevant except to define what the gun chamber is capable of use with (as it applies to claims 4, 5, 9, and 10).

Claim Rejections - 35 USC § 103

Claims 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,970,879 issued to Jamison (Jamison).

Regarding claims 4, 6-9, & 11-13, Jamison discloses a gun chamber (figure 2 element 16) for use with a gun action and barrel and configured for accepting a gun cartridge having a proximal and distal end for propelling a bullet of a pre-determined weight, the gun chamber having a case section (near the element number 16) proximal to the gun action and configured for housing a cartridge case, a free bore section (41) proximal to the barrel and distal end of the cartridge case, a shoulder section (angled section to the left of element 40 in figure 2A) at the proximal end angling inward from the case section, a neck portion (terminating in element 40) located between the shoulder section and the free bore section wherein the neck portion is configured for accepting a cartridge having a mouth for accepting a bullet, wherein the length of the case section is inherently dependent upon water weight volume of the cartridge case, the bore diameter of the gun barrel, and the weight of the bullet.

Jamison further discloses that the shoulder section angles inward at an angle of 30 degrees (col. 6 line 18), and a sum of the case section, shoulder section, neck section, and free bore section having a maximum total length of 4.0 inches (col. 4 lines 12-13, where the value as described in the claim is equal to L plus the section 41. L can be calculated to be max at 2.35, and the section 41 is very small relative to that amount, so it does not exceed 4.0 inches total).

Further, the case section has a length (L) of between 1.9 and 2.5 inches, as shown above.

Jamison does not disclose a 50-caliber cartridge with the measurements and ranges as claimed (discussed below).

Jamison discloses the claimed invention except for that the cartridge is a 50-caliber gun cartridge with a diameter of approximately 0.668 inches at the distal end and a mouth with a bore diameter of approximately .510 inches. 50 caliber bullets are known to be within the ranges claimed and it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide those values for a 50-caliber cartridge, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Additionally, under *KSR International Co. v. Teleflex Inc.*, it would be "obvious to try" to achieve the same design on differently-sized gun cartridges and, given the small variation in size that such a modification would entail, one of ordinary skill in the art could have pursued the 50 caliber option with a reasonable expectation of success.

Regarding claims 5 & 10, Jamison discloses the claimed invention except for the water weight volume of the casing in grains multiplied by the bore diameter of the mouth in thousandths of an inch divided by the weight of the bullet in grains is greater than or equal to 110 and less than or equal to 145. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the bullet properties in that range, since it has been held that where the general conditions of a

claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

(10) Response to Argument

Regarding the 112 1st rejection, at issue is whether the claim limitation that "the length of the case section is dependent upon water weight volume of the cartridge case, the bore diameter of the gun barrel, and the weight of the bullet" is properly supported by the specification.

The applicant has not clearly shown how "the length of the case section is dependent upon water weight volume of the cartridge case, the bore diameter of the gun barrel, and the weight of the bullet", in other words, there is no clear formula/series of calculations shown in the specification that indicate how "the water weight volume of the cartridge case, the bore diameter of the gun barrel, and the weight of the bullet" are used to determine "the length of the case section". The examiner points to the table, "50 Caliber Cartridges", in the specification beginning on page 12 and continuing on page 13 between paragraphs 0033 and 0034. The headings of the columns on page 12 show that "Case Capacity Measured by Water multiplied by Bore (thousandths of inches) divided by Bullet Weight (grains) equals Efficiency Rating", which means that "the water weight volume of the cartridge case multiplied by the bore diameter of the gun barrel and divided by the weight of the bullet" equals the "Efficiency Rating", therefore the examiner cannot determine how all three of those elements are used to determine the case length. Additionally, looking at the units in the table, the final unit of measure of the efficiency rating would be in thousands of an inch. However, it is

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unclear what this number represents since "efficiency rating" as designated as the title of this last column is typically a unit-less number. If this number is representing a case section length as claimed, it is unknown what section of the case this is referring to. Line 4 of claim 4 claims "a case section proximal to the gun action and configured for housing a cartridge having a diameter of approximately 0.688 inches at the distal end". However this language doesn't refer to any specific section of the case. Clearly the entire length of a case section for this diameter case is no where near 1/10th of an inch (0.10945 inches) if this "efficiency rating" was somehow related to the entire length of the case. Although one can work backwards for a given efficiency rating and ultimately determine the cartridge length (using water weight as a variable and diameter as a constant, the length of the cartridge would be varied to meet a resultant water weight), the claims do not mention an "efficiency rating" as a variable for determining the length. Additionally, just looking at the units of measure for the cited variables, water weight (grams), bullet weight (grams) and bore diameter (in), the only way to get the unit of measure for length (inches) would be either:

(water weight X diameter)/bullet weight or (bullet weight X diameter)/bullet weight

Only the second equation is disclosed by applicant and results only in an efficiency rating.

Absent any specific clear definition of how only water weight volume, bore diameter and bullet weight translates to a specific cartridge length, the rejection is appropriate.

With respect to the 103 rejections, at issue is that the appellants believe that Jamison does not render the present invention obvious since: 1) the subject matter claimed in claims 4 and 9 are not disclosed by Jamison; 2) the working ranges disclosed are not generated through normal testing by one skilled in the art; and 3) the disclosure of Jamison explicitly bars it from being appropriate prior art for the caliber bullets disclosed by claims 4-13.

First, applicant disagrees with the office's assertion that the length of the case section is inherently dependent upon the water weight volume of the case, bore diameter of the barrel, and weight of the bullet, noting that Jamison discloses a dependence on a length over diameter ratio.

In response, given that this claim is open ended (comprising), it is set forth that length is inherently dependant on these variables and further including a constant (efficiency rating). Additionally, it is noted that changing the diameter of the bullet would necessitate changing the dimensions of the case section. Thus the dimensions are certainly related. Further, changing the diameter would result in a change of the water weight volume, the bore diameter, and the weight of the bullet. The relation claimed is thus inherent because a relation such as this can be derived for any given bullet and any given gun chamber.

Second, applicant disagrees with the office's assertion that the working ranges disclosed are not generated through normal testing by one skilled in the art.

In response, the examiner offers that the notion of "utilizing weight in determination of cartridge length," as discussed by the applicant, is both an intended

use limitation and a product-by-process limitation. The independent claims, in both the apparatus and the method, related to a gun chamber and do not positively recite a cartridge. Instead, they merely recite that the length of one of the sections of the gun chamber are dependent on the properties of a hypothetical cartridge.

Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps; “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 277 USPQ 964.

Regarding the process for making the claimed projectile or the **Product by Process** Claims, applicant is directed to MPEP Section 2113 cited in a previous office action. Therefore, the case section length being formed with water weight volume, bore diameter, and bullet weight in mind is not pertinent in this instance to the patentability of this product claim.

Finally, applicant contends that the disclosure of Jamison explicitly bars it from being appropriate prior art for the caliber bullets disclosed by claims 4-13 and provides an affidavit citing that there are an infinite number of variables to change which would preclude the use of KSR reasoning.

In response, it is noted that the examiner's rejection relied upon the obviousness of changing dimensions in order to suit other purposes, especially when the dimensions

in question are "standard" dimensions for known cartridge sizes. Additionally, under *KSR International Co. v. Teleflex Inc.*, it would be "obvious to try" to achieve the same design on differently-sized gun cartridges and, given the small variation in size that such a modification would entail, one of ordinary skill in the art could have pursued the .50 caliber option with a reasonable expectation of success. .50 caliber cases are known such as the .50 BMG cited by the applicant. The bullet diameter is approx .50 inches and the case is approximate 0.68 inches and these are the two variables that the examiner is referring to. Clearly, the chamber would need to be slightly larger than both of these to allow for easy insertion of the case into the chamber.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Jonathan C Weber/

Examiner, Art Unit 3641

/Michael J. Carone/

Supervisory Patent Examiner, Art Unit 3641

Conferees:

/Marc Jimenez/
TQAS TC 3600

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